Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

HHS Public Access

Author manuscript

J Aggress Maltreat Trauma. Author manuscript; available in PMC 2019 May 15.

Published in final edited form as:

J Aggress Maltreat Trauma. 2017 ; 26(10): 1055–1071. doi:10.1080/10926771.2017.1350773.

Child Abuse - Suicide Resilience Link in African American Women: Interpersonal Psychological Mediators

Lucy J. Allbaugh[1], **Ivonne Andrea Florez**[1], **Danielle Render Turmaud**[2], **Nadia Quyyum**[1], **Sarah E. Dunn**[1], **Jungjin Kim**[1], and **Nadine J. Kaslow**[1]

[1]Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine, Atlanta, GA, USA

[2]Penfield College, Mercer University, Atlanta, GA, USA

Abstract

The interpersonal-psychological theory of suicidal behavior (IPTS) is an exemplary model for understanding the desire for suicidal behavior. As such, it is important to explore its applicability in ethnoracial minority groups at increasing risk for suicidal behavior, such as low-income African American women. Guided by the IPTS, the current study used five parallel mediation models to examine if there are links between individual types of childhood abuse (physical, sexual, emotional) and suicide resilience and between cumulative abuse (higher levels of abuse inclusive of all three types, more types of severe levels of abuse) and suicide resilience, and whether the three components of the model (thwarted belongingness, perceived burdensomeness, acquired capability for suicide) mediate these associations. In a sample of low-income, African American women (n = 179), higher levels of each of the three types of childhood abuse and cumulative abuse correlated with lower levels of suicide resilience. Parallel mediation analyses using bootstrapping techniques revealed that increased acquired capability for suicide mediated all five associations and perceived burdensomeness mediated three of the links (emotional abuse, cumulative abuse, and cumulative abuse-severe with suicide resilience). Attention is paid to the clinical implications of the findings in terms of attending to the acquired capability for suicide and suicide resilience in the assessment and treatment of low-income, suicidal, African American women.

Historically, suicide has been investigated in association with psychopathology, rather than as an independent phenomenon (Joiner, 2005; Ma, Batterham, Calear, & Han, 2016; Van Orden et al., 2010). Efforts have been mounted toward developing models that account for the unique etiology and correlates of suicidality. The interpersonal-psychological theory of suicidal behavior (IPTS) (Joiner, 2005; Van Orden et al., 2010) has emerged as a predominant framework for conceptualizing suicidal behavior. According to the IPTS, suicidal behavior is predicted by the interaction of suicide desire, which involves thwarted belongingness and perceived burdensomeness, and the capacity to commit suicide (i.e., acquired capability) (Joiner, 2005; Van Orden et al., 2010). Thwarted belongingness refers to people's perception of a lack of meaningful connections to others due to a view that no one

Correspondence should be addressed to: Nadine J. Kaslow, Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine, Grady Health System, 80 Jesse Hill Jr. Drive NE, Atlanta, GA 30303; nkaslow@emory.edu.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

cares about them and/or can empathize with their circumstances. Perceived burdensomeness reflects people's belief that they cannot meaningfully contribute to society and that their existence is a liability for others. When individuals habituate to physical pain and the fear of death in the context of repeated exposures to painful, risky, and stimulating experiences, they become capable of enacting plans to die.

Many studies have confirmed the model's premises that thwarted belongingness and perceived burdensomeness interact to predict suicidal ideation (Joiner et al., 2009; Van Orden, Witte, Gordon, Bender, & Joiner, 2008), increased acquired capability results in more serious attempts (Ma et al., 2016), and a three-way interaction predicts number of attempts (Anestis & Joiner, 2011). However, results have not universally validated these tenets (Bryan, Sinclair, & Heron, 2016; Gaskin-Wasson, Walker, Shin, & Kaslow, 2016; Ma et al., 2016). To clarify these discrepancies, there has been initial testing of the model in specific populations (Ma et al., 2016), such as African Americans, who are at growing risk for suicide (Curtin, Warner, & Hedegaard, 2016). In African American college students, perceived burdensomeness, thwarted belongingness, and the interaction among the three components all predicted suicidal ideation (Davidson, Wingate, Slish, & Rasmussen, 2010). In female African American suicide attempters, thwarted belongingness mediated the links between spiritual well-being and suicidality, depression, and hopelessness (Gaskin-Wasson et al., 2016). One study found similar levels of IPTS components in African Americans and Caucasians (Davidson & Wingate, 2011).

The IPTS posits that childhood trauma may be one risk factor for all three model components and for suicidal behavior (Van Orden et al., 2010). This supposition is consistent with evidence that childhood maltreatment is associated with later suicidality (Briere, Madni, & Godbout, 2016; Norman et al., 2012). Although no studies have tested all premises of the theory in childhood maltreatment survivors, among undergraduates, the childhood emotional abuse-suicide ideation link was mediated by perceived burdensomeness, but not by thwarted belongingness (Puzia, Kraines, Liu, & Kleiman, 2014), whereas acquired capability mediated the childhood physical abuse - self-harm link (Brausch & Holaday, 2014). Research also has shown that both cumulative childhood trauma and severity of such trauma are associated with a history of and risk for future suicidal behavior in vulnerable and diverse samples (Clements-Nolle, Wolden, & Bargmann-Losche, 2009; Mandelli, Carli, Roy, Serretti, & Sarchiapone, 2011; Torchalla, Strehlau, Li, Schuetz, & Krausz, 2012). To date, however, the IPTS has not been used to examine the association between the cumulative effect of childhood trauma and suicidal behavior. Given the disproportionately high rates of childhood maltreatment among African Americans (Drake et al., 2011) and people living in poverty (Eckenrode, Smith, McCarthy, & Dineen, 2014), it is important to identify factors that render low-income African American women less able to manage their suicidal thoughts and impulses in light of their cumulative history of childhood maltreatment and thus less resilient in the face of their own suicidality.

Increased attention has been paid to suicide resilience (Osman et al., 2004), the ability to cope with suicidal thoughts without engaging in suicidal behaviors due to a view that a range of personal and external support and resources are available. Low suicide resilience has been found in adults with a history of suicidal thoughts, actions, and/or plans that endorse limited

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

internal protective factors, emotional stability, and external protective factors (Osman et al., 2004). To date, suicide resilience has not been examined as an outcome variable related to the IPTS.

While resilience mitigates the risk for suicidal behavior among childhood maltreatment survivors (Roy, Carli, & Sarchiapone, 2011), no studies have examined the childhood maltreatment - suicide resilience link or the mediational role of IPTS components in this association. To fill this gap, this study examines the direct links between three types of childhood abuse (physical, sexual, emotional) and suicide resilience and the mediational roles of the three IPTS components in these links. In keeping with the IPTS, it was predicted among high risk, disadvantaged African American women with recent suicide attempt and exposure to intimate partner violence (1) the three types of childhood abuse would be independently associated with lower suicide resilience; and (2) higher levels of thwarted belongingness, perceived burdensomeness, and acquired capability would mediate these associations. Given the role cumulative childhood abuse plays on later psychological functioning, the study also investigates if (1) both more childhood abuse inclusive of all three types (cumulative) and more types of severe levels of childhood abuse (cumulative – severe levels) would be independently associated with lower suicide resilience; and (2) higher levels of the three IPTP components would mediate both the cumulative and cumulative- severe childhood abuse – suicide resilience associations.

Method

Participants

Participants were 179 African American women recruited from an urban public hospital. They were eligible if they self-identified as African American and reported both a suicide attempt and exposure to intimate partner violence in the prior year. Cognitive impairment, acute psychosis, and delirium were exclusion criteria. The sample's mean age was 36.65 (*SD* = 10.55), 44.7% were single/never married, 31.3% were married or partnered, 16.8% were divorced/separated, and 2.2% were widowers. In addition, 67.6% had children, 54.2% were homeless, 87.2% were unemployed, and 100% had a monthly household income less than $2000.

Measures

Childhood maltreatment was assessed using the 28 item self-report Childhood Trauma Questionnaire (CTQ) (Bernstein & Fink, 1998), which examines three types of abuse (physical, sexual, emotional) and two types of neglect (physical, emotional). Each subscale includes five items and respondents rate the validity of each statement from 1 (never true) to 5 (very often true). The measure has good test-retest reliability; internal consistency reliability; and, concurrent criterion validity, and convergent validity (Bernstein & Fink, 1998; Scher, Stein, Asmundson, McCreary, & Forde, 2001; Spinhoven et al., 2014). It has shown measurement invariance across racial groups (Thombs, Lewis, Bernstein, Medrano, & Hatch, 2007) and high internal consistency reliability in African American women (Anderson, Tiro, Price, Bender, & Kaslow, 2002) (α's = .89, .93, and .85 for physical, sexual, and emotional abuse in current sample). The five factors have good content and face

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

validity and have been confirmed through confirmatory factor analysis (Bernstein & Fink, 1998; Scher et al., 2001; Spinhoven et al., 2014). In the current study, the (1) three abuse subscale total scores were considered separately (independent abuse scores), (2) abuse subscale total scores were summed (cumulative abuse score), and (3) cut scores for severe levels of each form of abuse were used to determine a count score of types of severe abuse experienced (cumulative – severe) (Bernstein & Fink, 1998).

Two measures assessed the three components of the IPTS. The Interpersonal Needs Questionnaire (INQ-25) (Anestis, Bagge, Tull, & Joiner, 2011; Anestis & Joiner, 2011) tapped thwarted belongingness (10 items) and perceived burdensomeness (15 items). Items were rated on a 7-point Likert scale; higher scores indicate more thwarted belongingness and perceived burdensomeness. The INQ, which has five versions, has good test-retest reliability; internal item consistency; and criterion, convergent, and concurrent validity in samples in the United States and internationally (Hallensleben, Spangenberg, Kapusta, Forkmann, & Glaesmer, 2016; Hill et al., 2015; Van Orden, Cukrowicz, Witte, & Joiner, 2012). Despite good internal consistency in other samples, for the current sample it was adequate for thwarted belongingness (α = .54) and low for perceived burdensomeness (α = .42). Acquired capability was assessed using the 20-item Acquired Capability for Suicide Scale (ACSS) (Van Orden et al., 2008), which measures fearlessness of death and potentially fatal self-injury. Items are rated on a 5-point Likert scale; higher total scores indicate more acquired capability. The ACSS has good discriminant and convergent validity and adequate internal consistency reliability (Anestis, Bender, Selby, Ribeiro, & Joiner, 2011; Van Orden et al., 2008) (α = .74 for current sample).

To evaluate protective factors against suicide (i.e., suicide resilience), the 25-item Suicide Resilience Inventory – 25 (SRI – 25) (Osman et al., 2004) was used. Items were rated on a 6-point Likert scale; higher scores reflect greater levels of suicide resilience across three dimensions (internal protective, emotional stability, and external protective). The SRI-25 total has good discriminant, concurrent, and convergent validity and acceptable internal consistency reliability (Fang, Freedenthal, & Osman, 2014; Osman et al., 2004; Rutter, Freedenthal, & Osman, 2008) (α = .92 in current sample).

Procedures

Recruitment mechanisms and study procedures were approved by the University's Institutional Review Board and hospital's Research Oversight Committee. Participants were recruited from hospital inpatient units and outpatient clinics. Eligible women were scheduled for the pre-intervention, 2–3 hour, face-to-face assessment; this study used this pre-intervention data. During the assessment, the interviewer read aloud each of the 24 measures to ensure participant comprehensions. Participants were compensated $20 for their time.

Data Analysis

Statistical analyses were performed using SPSS statistical software. Missing data were determined to be missing completely at random (MCAR) according to Little's MCAR test; $\chi^2(65) = 65.50$, $p = .46$. Therefore, missing data were singly imputed at the scale level using

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

the expectation maximization algorithm, consistent with standard recommendations (Graham, 2009). The indirect effects of the proposed models were tested using bootstrapping techniques (5,000 bootstrapped samples) in the PROCESS macro for SPSS (Hayes, 2013). PROCESS Model 4, which allows multiple mediators to be tested in parallel, was used for the five mediational models. Each model used the CTQ score as the independent factor; thwarted belongingness, perceived burdensomeness, and acquired capability for suicide as three, parallel mediators; and the suicide resilience total score as the dependent variable. Separate models were run for the severity of each type of childhood abuse (i.e., physical, sexual, and emotional abuse, cumulative abuse, cumulative abuse-severe) to determine their unique relation with the IPTS and suicide resilience. See Figures 1–3 for a visual depiction of the three models for these independent childhood abuse scores. In addition, separate models were run for the cumulative and cumulative-severe childhood abuse scores and these are depicted in Figures 4 and 5.

Results

Preliminary Analyses

Bivariate correlations were used to identify relations among study measures; correlation coefficients are displayed in Table 1. As predicted, strong positive relations were found among the three types of childhood abuse and all three abuse types were negatively associated with suicide resilience. A significant positive correlation also was found between thwarted belongingness and perceived burdensomeness. There also was a positive correlation between physical abuse and acquired capability for suicide, consistent with the IPTS. Surprisingly, perceived burdensomeness was not correlated with physical or sexual abuse and thwarted belongingness was not correlated with any abuse types or with suicide resilience.

Mediation Models

Independent abuse scores.—Suicide resilience was predicted by the full model when it included childhood physical abuse and the three IPTS factors. This model accounted for 31% of the variance [$F(4, 174) = 19.99$, $p < .001$]). There was a significant direct effect of childhood physical abuse on suicide resilience ($b = -.72$, $SE = .22$, 95% CI [−1.16 - −.28]). Bootstrap estimations revealed a significant indirect effect through the acquired capability for suicide ($b = -.29$, $SE = .11$, 95% CI [−.54 - −.10]). No significant indirect effect was found through either thwarted belongingness or perceived burdensomeness. In other words, greater severity of childhood physical abuse directly predicted lower suicide resilience and higher levels of acquired capability for suicide, but neither IPTS interpersonal factor, mediated this association.

Suicide resilience also was predicted by the full model when childhood sexual abuse and the three IPTS factors were considered. This model accounted for 31% of the variance [$F(4, 174) = 19.39$, $p < .001$]). A significant direct effect of childhood sexual abuse on suicide resilience was found ($b = -.56$, $SE = .19$, 95% CI [−93 - −.18]). Bootstrap estimations also revealed a significant indirect effect through the acquired capability for suicide ($b = -.19$, $SE = .08$, 95% CI [−.39 - −.07]). Again, no significant indirect effect was found through either

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

thwarted belongingness or perceived burdensomeness. In other words, similar to findings on childhood physical abuse, greater severity of childhood sexual abuse was found to directly predict lower suicide resilience and higher levels of acquired capability for suicide were found to mediate this relation. Neither of the IPTS interpersonal factors emerged as mediators of this relation.

Last, suicide resilience was predicted by the full model when it included childhood emotional abuse and the three IPTS factors. This model accounted for 31% of the variance [$F(4, 174) = 19.61$, $p < .001$]). There was a significant direct effect of childhood emotional abuse on suicide resilience ($b = -.74$, $SE = .24$, 95% CI [−1.22 - −.26]). Bootstrap estimations revealed significant indirect effects through both the acquired capability for suicide ($b = -.30$, $SE = .10$, 95% CI [−.53 - −.13]) and perceived burdensomeness ($b = -.33$, $SE = .16$, 95% CI [−.72 - −.08]). No significant indirect effect was found for thwarted belongingness. In other words, greater severity of childhood emotional abuse also was found to directly predict lower suicide resilience and increased acquired capability for suicide again emerged as a significant mediator. Perceived burdensomeness also was found to mediate this relation, which was unique to childhood emotional abuse; thwarted belongingness did not emerge as a mediator of this relation.

Cumulative abuse scores.—Suicide resilience was predicted by the full model when it included the cumulative abuse score and the three IPTS factors. This model accounted for 32% of the variance [$F(4, 174) = 20.47$, $p < .001$]). There was a significant direct effect of cumulative abuse on suicide resilience ($b = -.33$, $SE = .09$, 95% CI [−.51 - −.16]). Bootstrap estimations revealed significant indirect effects through both the acquired capability for suicide ($b = -.11$, $SE = .04$, 95% CI [−.21 - −.04]) and perceived burdensomeness ($b = -.08$, $SE = .05$, 95% CI [−.20 - −.01]). No significant indirect effect was found for thwarted belongingness. In other words, similar to findings with emotional abuse considered independently, higher levels of cumulative abuse was found to directly predict lower suicide resilience and both increased acquired capability for suicide and perceived burdensomeness were found to mediate this relation.

Suicide resilience was also predicted by the full model when it included cumulative types of severe abuse (cumulative-severe) and the three IPTS factors. This model accounted for 30% of the variance [$F(4, 174) = 18.40$, $p < .001$]). There was a significant direct effect of cumulative-severe abuse on suicide resilience ($b = -3.62$, $SE = 1.29$, 95% CI [−6.16 - −1.08]). Bootstrap estimations revealed significant indirect effects through both the acquired capability for suicide ($b = -1.59$, $SE = .59$, 95% CI [−3.07 - −.69]) and perceived burdensomeness ($b = -1.11$, $SE = .67$, 95% CI [−2.85 - −.14]). No significant indirect effect was found for thwarted belongingness. In other words, more types of severe childhood abuse directly predicted lower suicide resilience, mediated by acquired capability for suicide and perceived burdensomeness.

Discussion

This study advances our knowledge base in four ways. First, the results reveal a link between three types of childhood abuse and suicide resilience in low-income African American

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

women; higher levels of self-reported childhood physical, sexual, and emotional abuse correlated with lower suicide resilience. Second, the data highlight the powerful meditational role of the acquired capability for suicide between each type of childhood abuse and suicide resilience and the meditational role of both acquired capability and perceived burdensomeness between cumulative levels of childhood abuse and suicide resilience. Third, this is the first time the IPTS has been applied to suicide resilience and the results are promising. Finally, the findings add to the nascent research on the IPTS's applicability to low-income, African Americans.

Historically, researchers have focused primarily on the link between childhood maltreatment defined broadly and suicidal behavior in adulthood, a connection that has been found in African American women (Anderson et al., 2002). More recently, investigators studying specific types of maltreatments, have found associations between self-reported childhood physical (Norman et al., 2012), sexual (Devries et al., 2014), and emotional (Briere et al., 2016; De Araujo & Lara, 2016; Norman et al., 2012) abuse and later suicidal ideation and attempts. The only study to address this in African Americans focused only on sexual abuse (Lamis et al., 2016). Thus, this is the first time an investigation has demonstrated that multiple forms of childhood abuse are relevant to later suicidal behavior in African American women.

Although one study demonstrated that a general measure of resilience differentiated between survivors of maltreatment with and without a suicide attempt (Roy et al., 2011), no prior studies have examined the link between childhood maltreatment and the construct of suicide resilience. Suicide resilience, which is distinct from suicide risk, is more than simply the absence of suicidal thoughts and behaviors (Johnson, Wood, Gooding, Taylor, & Tarrier, 2011). It is instead a constellation of factors that buffer an individual against the risk for suicidal behavior in the presence of significant stressors, other risk factors, and suicidal thoughts (Johnson et al., 2011; Osman et al., 2004). Thus, results from the current study highlight the value of recognizing the negative impact that various types of childhood abuse and their cumulative effect have on women's capacity to be resilient in the face of suicidal thoughts and urges and not act upon them.

The finding that acquired capability was the IPTS component that mediated the links between both each specific abuse type and cumulative abuse and later suicide resilience, underscores the unique role of this construct. The fact that perceived burdensomeness was a mediator when considering both childhood emotional abuse as an independent predictor and the cumulative effect suggests its link to this specific form of abuse and the additive impact of this construct in the context of increased exposure and severity of abuse. The IPTS predicts that suicidal ideation is most present in individuals who experience high levels of both perceived burdensomeness and thwarted belongingness, whereas it is the interaction of suicidal thoughts and the acquired capability for suicide that the model views as key to the development of suicidal plans, attempts, and death by suicide (Christensen, Batterham, Soubelet, & Mackinnon, 2013; Joiner, 2005; Ribeiro & Joiner, 2009; Van Orden et al., 2010; Van Orden et al., 2008). This is not the first time that acquired capability has functioned differently than the other two model components (Anestis, Bagge, et al., 2011; Silva, Ribeiro, & Joiner, 2015).

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Combat experiences have been found to predict acquired capability, but not the other two components of the model (Bryan et al., 2016). This has been attributed to the fact that exposure to painful experiences, such as combat trauma or in the current study childhood abuse, may result in habituation to fear of painful experiences including both the repeated traumas and death by suicide (Selby et al., 2010). As a result, such traumatic experiences may impact acquired capability, but not perceived burdensomeness or thwarted belongingness. The IPTS posits that provocative experiences, such as childhood abuse, contribute to people's habituation to fear and pain, which in turn enhances their capability to engage in suicidal behaviors, but not to their levels of negative emotional and psychological functioning that fuel the desire for suicidal behavior (Van Orden et al., 2010). Individuals with significant exposure to such provocative experiences have been found to be most likely to engage in suicidal behaviors when they exhibit cognitive, rather than psychophysiological, responses reflective of fearlessness and pain insensitivity (Smith, Cukrowicz, Poindexter, Hobson, & Cohen, 2010). Moreover, variations in the degree to which individuals have developed fearlessness and pain insensitivity have been shown to determine the severity and lethality of their suicidal behavior and the method of self-harm that they select (Smith & Cukrowicz, 2010).

This is not the first study to find a strong connected between childhood emotional abuse and perceived burdensomeness. For example, in a study of individual with moderate to severe childhood abuse, emotional abuse, but not physical or sexual abuse, was prospectively linked to suicidal ideation, and mediated by perceived burdensomeness but not thwarted belongingness (Puzia et al., 2014). The study's investigators hypothesized that childhood emotional abuse may uniquely increase a person's sense of encumbering others in their social environment.

Thus, there may be two reasons why in this study perceived burdensomeness mediated the relation between cumulative childhood abuse (including cumulative severe abuse) and suicide resilience. First, these cumulative variables included childhood emotional abuse and thus its inclusion may be necessary for activating this mediational pathway. Second, the findings are in accord with previous research showing cumulative levels childhood trauma to uniquely predict more overall psychological vulnerability, emotional dysregulation, and psychiatric symptoms (Cloitre et al., 2009; Walsh, DiLillo, & Scalora, 2011) and that both emotional dysregulation and mental health problems are strongly correlated with perceived burdensomeness (Anestis, Bagge, et al., 2011; Silva et al., 2015). The effect of cumulative childhood abuse, including severe levels of multiple types of such abuse, on perceived burdensomeness further supports the assumption that emotional and psychological disruptions are strongly linked to risk factors for suicidality via perceived burdensomeness (Van Orden et al., 2010).

This investigation's focus on the relevance of the IPTS to suicide resilience is in keeping with recent efforts to incorporate resilience into the model. Studies have found that the search for meaning in life, viewed as a resilience factor, mediates the association between the IPTS variables and suicidal ideation (Kleiman & Beaver, 2013). Both self-forgiveness and mindfulness, also deemed to be resilience factors, have been found to moderate the relation between perceived burdensomeness and suicidal ideation (Buitron, Hill, & Pettit, in

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

press; Cheavens, Cukrowicz, Hansen, & Mitchell, 2016). The current investigation expands upon this body of work by attending to suicide resilience as an outcome variable. Future researchers may want to include IPTS risk factors and a series of resilience factors to gain a more nuanced understanding of variables that mediate and moderate the child abuse – suicide resilience link.

The final major contribution is that it builds upon the limited body of empirical work investigating the relevance of the IPTS to African Americans. Until recently, the model has been tested primarily in African American college students (Davidson & Wingate, 2011; Davidson et al., 2010). The only study to apply the theory to an African American clinical population did not examine all three model components; the acquired capability for suicide was not included as a variable (Gaskin-Wasson et al., 2016). This prior study found that thwarted belongingness, but not perceived burdensomeness, mediated the link between spiritual well-being and three suicide related outcomes (i.e., suicidal ideation, hopelessness, depressive symptoms). In contrast, in the present study, thwarted belongingness did not serve a mediating role in any of the child abuse – suicide resilience outcome links, and perceived burdensomeness functioned as a mediator of this link only when emotional abuse was considered either as an independent predictor or as part of a set of cumulative experiences. Therefore, more comprehensive testing of the IPTS in diverse samples of African Americans is needed, with attention to a range of predictor and outcome variables, along with inclusion of all three components of the model.

There are several limitations that should be considered. The use of a cross-sectional design precluded understanding the directionality in the associations among the variables. The sample was limited with regard to its demographics. While the advantage of this is that the findings are culturally relevant, additional research is needed to identify similiarties and differences in the relevance of the IPTS components to individuals from different sociodemographic groups. Such research will shed light on the generalizablity of the findings across populations. There are questions about the appropriateness of the measures for this population. The internal consistency reliabilities for the INQ subscale are low, raising the possiblity that it taps a more unidimensional construct in this sample. The alpha increases to .63 when all items are considered together, suggesting it may be useful to factor analyze this scale in similar populations to understand how the IPTS constructs are best captured. All of the measures were self-report in nature. As a result, associations among the variables may be inflated due to monomethod variance. In addition, self-reports may not adequately reflect the relevant objective behaviors. Finally, many relevant constructs were not examined nor was a moderated mediation framework included. Future studies would be strengthened by a more inclusive approach.

Despite the aforementioned limitations, the findings represent a novel contribution and advance our understanding of the relevance of the IPTS to this unique population and to suicide resilience. We believe that the results have meaningful clinical implications. First, it is useful to use the IPTS to guide assessments and interventions with low-income, African American women, particularly those with a history of childhood abuse and suicidal behavior. In addition to asking standard suicide risk assessment questions, it is imperative that clinicians evaluate all three IPTS components and gather data about experiences with and

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

habituation to pain and provocation related to trauma, suicidal behavior, and other indicators of impulsivity (Stellrecht et al., 2006). Such assessments should also focus on independent and cumulative childhood abuse and suicide resilience. Second, since acquired capability is relatively stable it is unlikely to be malleable in response to crisis intervention (Stellrecht et al., 2006). This does not mean that appropriate preventative measures should not be taken when someone is suicidal and has a high level of acquired capability, but rather that such individuals are more likely to benefit from interventions that target deficits in emotion regulation, problem-solving, and impulsivity, such as dialectical behavior therapy (DBT) and mindfulness based approaches (Linehan, 2015; Williams, Duggan, Crane, & Fennell, 2008). If the acquired capability is addressed by clinicians so that the extent to which people encounter painful and provocative situations is reduced and they become increasingly able to experience, recognize, and accept their reactions to such circumstances, treatment outcomes will be optimized and the risk for suicidal behaviors decreased. Our findings also provide treatment guidelines specific to individuals with an extensive trauma history. For instance, in these individuals targeting interpersonal relationships, maladaptive thinking patterns on relationships, and emotional regulation would be particularly important to reduce vulnerability associated with perceived burdensomeness. In addition, intervention efforts for individuals with single or multiple experiences of childhood trauma must aim to bolster suicide resilience by de-linking suicidal thoughts from actions. This can be accomplished in part by utilizing DBT techniques designed to strengthen the personal and external coping strategies that enable individuals to optimally manage their affective distress. In addition, acceptance and commitment therapy may help women, such as those in this sample, be more accepting of their unwanted suicidal thoughts and simultaneously develop a greater sense of commitment to and action toward living a valued and meaningful life (Hayes, Strosahl, & Wilson, 2011).

Acknowledgments

This research was supported by a grant from the National Institute of Mental Health (1R01MH078002–01A2, Group interviews for abused, suicidal Black women) awarded to the last author (Kaslow).

References

Anderson PL, Tiro JA, Price A, Bender M, & Kaslow NJ (2002). Additive impact of childhood emotional, physical, and sexual abuse on suicide attempts among low-income, African American women. Suicide and Life Threatening Behavior, 32, 131–138. doi: 10.1521/suli.32.2.131.24405 [PubMed: 12079029]

Anestis MD, Bagge CL, Tull MT, & Joiner TE Jr. (2011). Clarifying the role of emotion dysregulation in the interpersonal-psychological theory of suicidal behavior in an undergraduate sample. Journal of Psychiatric Research, 45, 603–611. doi: 10.1016/j.jpsychires.2010.10.013 [PubMed: 21092986]

Anestis MD, Bender TW, Selby EA, Ribeiro JD, & Joiner TE Jr. (2011). Sex and emtoin in the acquired capability for suicide. Archives of Suicide Research, 15, 172–182. doi: 10.1080/13811118.2011.566058 [PubMed: 21541863]

Anestis MD, & Joiner TE Jr. (2011). Examining the role of emotion in suicidality: Negative urgency as an amplifier of the relationship between components of the interpersonal-psychology therapy of suicidal behavior and lifetime number of suicide attempts. Journal of Affective Disorders, 129, 261–269. doi: 10.1016/j.jad.2010.08.006 [PubMed: 20825997]

Bernstein DP, & Fink L (1998). Childhood Trauma Questionnaire: A retrospective self-report San Antonio, TX: Harcourt, Brace, and Company.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Brausch AM, & Holaday TC (2014). Suicide-related concerns as a mediator between physical abuse and self-harm behaviors in college students. Crisis: The Journal of Crisis Intervention and Suicide Prevention, 36, 440–446. doi: 10.1027/0227-5910/a000349

Briere J, Madni LA, & Godbout N (2016). Recent suicidality in the general population: Multivariate association with childhood maltreatment and adult victimization. Journal of Interpersonal Violence, 31, 3063–3079. doi: 10.1177/0886260515584339 [PubMed: 25948645]

Bryan CJ, Sinclair S, & Heron EA (2016). Do military personnel 'acquire' the capability for suicide from combat? A test of the interpersonal-psychological theory of suicide. Clinical Psychological Science, 43, 376–385. doi: 10.1177/2167702615595000

Buitron V, Hill RM, & Pettit JW (in press). Mindfulness moderates the association between perceived burdensomeness and suicidal ideation in adults with elevated depressive symptoms. Suicide and Life-Threatening Behavior. doi: 10.1111/sltb.12314

Cheavens JS, Cukrowicz KC, Hansen R, & Mitchell SM (2016). Incorporating resilience factors into the Interpersonal Theory of Suicide: The role of hope and self-forgiveness in older adult sample. Journal of Clinical Psychology, 72, 58–69. doi: 10.1002/jclp.22230 [PubMed: 26448342]

Christensen H, Batterham PJ, Soubelet A, & Mackinnon AJ (2013). A test of the interpersonal therapy of suicide in a large community-based cohort. Journal of Affective Disorders, 144, 225–234. doi: 10.1016/j.jad.2012.07.002 [PubMed: 22862889]

Clements-Nolle K, Wolden M, & Bargmann-Losche J (2009). Childhood trauma and risk for past and future suicide attempts among women in prison. Women's Health Issues, 19, 185–192. doi: 10.1016/j.whi.2009.02.002 [PubMed: 19447323]

Cloitre M, Stolbach BC, Herman JL, Van der Kolk BA, Pynoos R, Wang J, et al. (2009). A developmental approach to complex PTSD: Childhood and adult cumulative trauma as predictors of symptom complexity. Journal of Traumatic Stress, 22, 399–408. doi: 10.1002/jts.20444 [PubMed: 19795402]

Curtin SC, Warner M, & Hedegaard H (2016). Suicide rates for females and males by race and ethnicity: United States, 1999 and 2014. NCHS Health E-Stat: National Center for Health Statistics.

Davidson CL, & Wingate LR (2011). Racial disparities in risk and protective factors for suicide. Journal of Black Psychology, 37, 499–516. doi: 10.1177/0095798410397543

Davidson CL, Wingate LR, Slish ML, & Rasmussen KA (2010). The great Black hope: Hope and its relation to suicide risk among African Americans. Suicide and Life-Threatening Behavior, 40, 170–180. doi: 10.1521/suli.2010.40.2.170 [PubMed: 20465352]

De Araujo R, & Lara D (2016). More than words: The association of childhood emotional abuse and suicidal behavior. European Psychiatry, 37, 14–21. doi: 10.1016/j.eurpsy.2016.04.002 [PubMed: 27442978]

Devries KM, Mak JYT, Child JC, Falder G, Bacchus LJ, Astbury J, et al. (2014). Childhood sexual abuse and suicidal behavior: A meta-analysis. Pediatrics, 133, e1331–e1344. doi: 10.1542/peds.2013-2166 [PubMed: 24733879]

Drake B, Jolley JM, Lanier P, Fluke J, Barth RP, & Jonson-Reid M (2011). Racial bias in child protection? A comparison of competing explanations using national data. Pediatrics, 127, 471–478. doi: 10.1542/peds.2010-1710 [PubMed: 21300678]

Eckenrode J, Smith EG, McCarthy ME, & Dineen M (2014). Income inequality and child maltreatment in the United States. Pediatrics, 133, 454–461. doi: 10.1542/peds.2013-1707 [PubMed: 24515511]

Fang Q, Freedenthal S, & Osman A (2014). Validation of the Suicide Resilience Inventory-25 with American and Chinese college students. Suicide and Life-Threatening Behavior, 45, 51–64. doi: 10.1111/sltb.12108 [PubMed: 24916360]

Gaskin-Wasson AL, Walker KL, Shin LJ, & Kaslow NJ (2016). Spiritual well-being and psychological adjustment: Mediated by interpersonal needs. Journal of Religion and Health. doi: 10.1007/s10943-016-0275-y

Graham JW (2009). Missing data analysis: Making it work in the real world. Annual Review of Psychology, 60, 549–576. doi: 10.1146/annurev.psych.58.110405.085530

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Hallensleben N, Spangenberg L, Kapusta ND, Forkmann T, & Glaesmer H (2016). The German version of the Interpersonal Needs Questionnaire (INQ) - Dimensionality, psychometric properties and population-based norms. Journal of Affective Disorders, 195, 191–198. doi: 10.1016/j.jad.2016.01.045 [PubMed: 26896813]

Hayes AF (2013). An introduction to mediation, moderation, and conditional process analysis: A regression-based approach. New York: Guilford.

Hayes SC, Strosahl KD, & Wilson KG (2011). Acceptance and commitment therapy: The process and practice of mindful change (Second edition) New York, NY: The Guilford Press.

Hill RM, Rey Y, Marin CE, Sharp C, Green KL, & Pettit JW (2015). Evaluating the Interpersonal Needs Questionnaire: Comparison of the reliability, factor structure, and predictive validity across five revisions. Suicide and Life-Threatening Behavior, 45, 302–314. doi: 10.1111/sltb.12129 [PubMed: 25308815]

Johnson J, Wood AM, Gooding P, Taylor PJ, & Tarrier N (2011). Resilience to suicidality: The buffering hypothesis. Clinical Psychology Review, 31, 563–591. doi: 10.1016/j.cpr.2010.12.007 [PubMed: 21276646]

Joiner TE Jr. (2005). Why people die by suicide. Cambridge, MA: Harvard University Press.

Joiner TE Jr., Van Orden KA, Witte TK, Selby EA, Ribeiro JD, Lewis R, et al. (2009). Main predictions of the interpersonal-psychological theory of suicidal behavior: Empirical tests in two samples of young adults. Journal of Abnormal Psychology, 118, 634–646. doi: 10.1037/a0016500 [PubMed: 19685959]

Kleiman EM, & Beaver JK (2013). A meaningful life is worth living: Meaning in life as a suicide resiliency factor. Psychiatry Research, 210, 934–939. doi: 10.1016/j.psychres.2013.08.002 [PubMed: 23978733]

Lamis DA, Cavanaugh CE, Anastasiades MH, Garcia-Williams A, Anderson C, & Kaslow NJ (2016). Intimate partner sexual coercion mediates the childhood sexual abuse-suicidal ideation link among African American women. Journal of Black Psychology. doi: 10.1177/0095798416644885

Linehan MM (2015). DBT skills training manual (Second edition) New York, NY: The Guilford Press.

Ma J, Batterham PJ, Calear A, & Han J (2016). A systematic review of the predictions of the interpersonal theory of suicidal behavior. Clinical Psychology Review, 46, 34–45. doi: 10.1016/j.cpr.2016.04.008 [PubMed: 27155061]

Mandelli L, Carli V, Roy A, Serretti A, & Sarchiapone M (2011). The influence of chldhood trauma on the onset and repetition of suicidal behavior: An investigation in a high risk sample of male prisoners. Journal of Psychiatric Research, 45, 742–747. doi: 10.1016/j.jpsychires.2010.11.005 [PubMed: 21115183]

Norman RE, Byambaa M, De R, Butchart A, Scott J, & Vos T (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: A systematic review and meta-analysis. PLOS Medicine, 9. doi: 10.1371/journal.pmed.1001349

Osman A, Gutierrez PM, Muehlenkamp JJ, Dix-Richardson F, Barrios FX, & Kopper BA (2004). Suicide Resilience Inventory −25: Development and preliminary psychometric properties. Psychological Reports, 94, 1349–1360. doi: 10.2466/PRO94.3.1349-1360 [PubMed: 15362416]

Puzia ME, Kraines MA, Liu RT, & Kleiman EM (2014). Early life stressors and suicidal ideation: Mediation by interpersonal risk factors. Personality and Individual Differences, 56, 68–72. doi: 10.1016/j.paid.2013.08.027

Ribeiro JD, & Joiner TE Jr. (2009). The Interpersonal-Psychological Theory of Suicidal Behavior: Current status and future directions. Journal of Clinical Psychology, 65, 1291–1299. doi: 10.1002/jclp.20621 [PubMed: 19827114]

Roy A, Carli V, & Sarchiapone M (2011). Resilience mitigates the suicide risk associated with childhood trauma. Journal of Affective Disorders, 133, 591–594. doi: 10.1016/j.jad.2011.05.006 [PubMed: 21621850]

Rutter PA, Freedenthal S, & Osman A (2008). Assessing protection from suicidal risk: Psychometric properties of the Suicide Resilience Inventory. Death Studies, 32, 142–153. doi: 10.1080/07481180701801295 [PubMed: 18693384]

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

Scher CD, Stein MB, Asmundson GJG, McCreary DR, & Forde DR (2001). The Childhood Trauma Questionnaire in a community sample: Psychometric properties and normative data. Journal of Traumatic Stress, 14, 843–857. doi: 10.1023/A:1013058625719 [PubMed: 11776429]

Selby ED, Anestis MD, Bender TW, Ribeiro JD, Nock MK, Rudd MD, et al. (2010). Overcoming the fear of lethal injury: Evaluating suicidal behavior in the military through the lens of the Interpersonal–Psychological Theory of Suicide. Clinical psychology review, 30, 298–307. doi: 10.1016/j.cpr.2009.12.004 [PubMed: 20051309]

Silva C, Ribeiro JD, & Joiner TE Jr. (2015). Mental disorders and thwarted belongingness, perceived burdensomeness, and acquired capability for suicide. Psychiatry Research, 226, 316–327. doi: 10.1016/j.psychres.2015.01.008 [PubMed: 25650048]

Smith PN, & Cukrowicz KC (2010). Capable of suicide: A functional model of the acquired capability copmonent of the interpersonal-psychological theory of suicide. Suicide and Life-Threatening Behavior, 40, 266–275. doi: 10.1521/suli.2010.40.3.266 [PubMed: 20560748]

Smith PN, Cukrowicz KC, Poindexter EK, Hobson V, & Cohen LM (2010). The acquired capability for suicide: A comparison of suicide attempters, suicide ideators, and non-suicidal controls. Depression and Anxiety, 27, 871–877. doi: 10.1002/da.20701 [PubMed: 20821802]

Spinhoven P, Penninx BW, Hickendorff M, van Hemert AM, Bernstein DP, & Elzinga BM (2014). Childhood Trauma Questionnaire: Factor structure, measurement invariance, and validity across emotional disorders. Psychological Assessment, 26, 717–729. doi: 10.1037/pas0000002 [PubMed: 24773037]

Stellrecht NE, Gordon KH, Van Orden K, Witte TK, Wingate LR, Cukrowicz KC, et al. (2006). Clinical applications of the interpersonal-psychological theory of attempted and completed suicide. Journal of Clinical Psycholgy, 62, 211–222. doi: 10.1002/jclp.20224

Thombs BD, Lewis C, Bernstein DP, Medrano MA, & Hatch JP (2007). An evaluation of the measurement equivalence of the Childhood Trauma Questionnaire - Short Form across gender and race in a sample of drug-abusing adults. Journal of Psychosomatic Research, 63, 391–398. doi: 10.1016/j.jpsychores.2007.04.010 [PubMed: 17905047]

Torchalla I, Strehlau V, Li K, Schuetz C, & Krausz M (2012). The association between chlidhood maltreatment subtypes and current suicide risk among homelesss men and women. Child Maltreatment, 17, 132–143. doi: 10.1177/1077559512439350 [PubMed: 22548892]

Van Orden KA, Cukrowicz KC, Witte TK, & Joiner TE Jr. (2012). Thwarted belongingness and perceived burdensomeness: Construct validity and psychometric properties of the Interpersonal Needs Questionnaire. Psychological Assessment, 24, 197–215. doi: 10.1037/a0025358 [PubMed: 21928908]

Van Orden KA, Witte TK, Cukrowicz KC, Braithwaite SR, Selby EA, & Joiner TE Jr.,. (2010). The interpersonal theory of suicide. Psychological Review, 117, 575–600. doi: 10.1037/a0018697 [PubMed: 20438238]

Van Orden KA, Witte TK, Gordon KH, Bender TW, & Joiner TE Jr.,. (2008). Suicidal desire and the capability for suicide: Tests of the interpersonal-psychological theory of suicidal behavior among adults. Journal of Consulting and Clinical Psychology, 76, 72–83. doi: 10.1037/0022-006X.76.1.72 [PubMed: 18229985]

Walsh K, DiLillo D, & Scalora MJ (2011). The cumulative impact of sexual revictimization on emotion regulation difficulties: An examination of female inmates. Violence Against Women, 17, 1103–1118. doi: 10.1177/1077801211414165 [PubMed: 21727155]

Williams JMG, Duggan DS, Crane C, & Fennell JV (2008). Mindfulness-based cognitive therapy for prevention of recurrence of suicidal behavior. Journal of Clinical Psychology: In Session, 62, 201–210. doi: 10.1002/jclp.20223

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

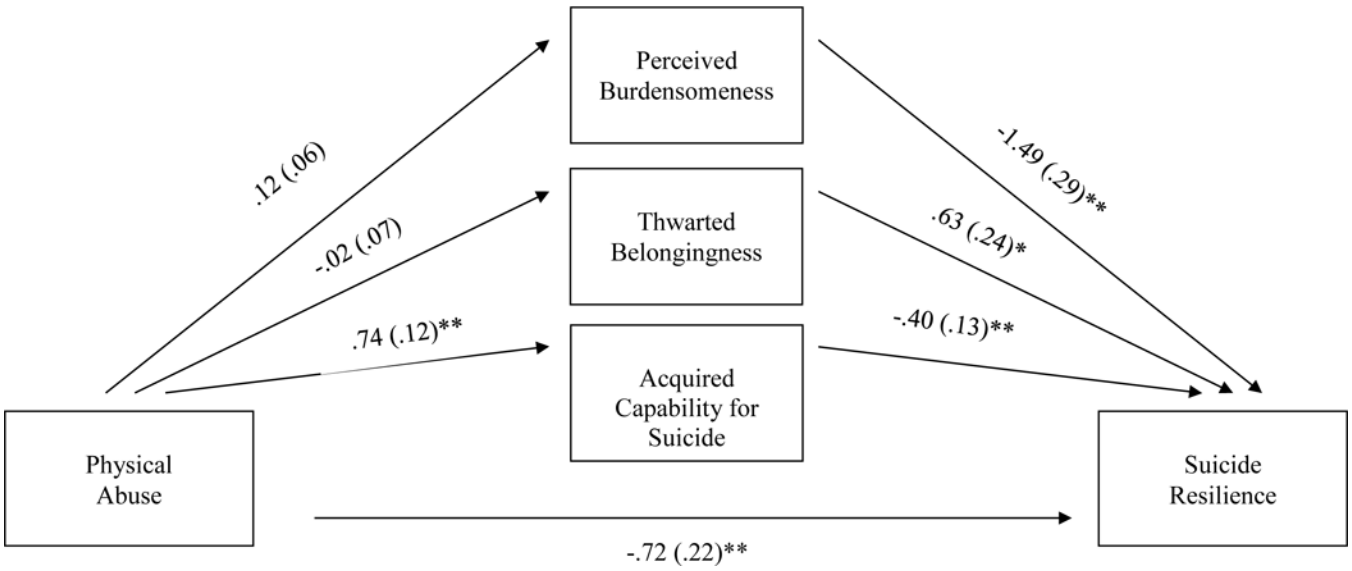

Figure 1.

Childhood Physical Abuse Model Parameters *Notes.* Presented are unstandardized parameter estimates; standard errors in parentheses; *$p < .05$; **$p < .01$.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

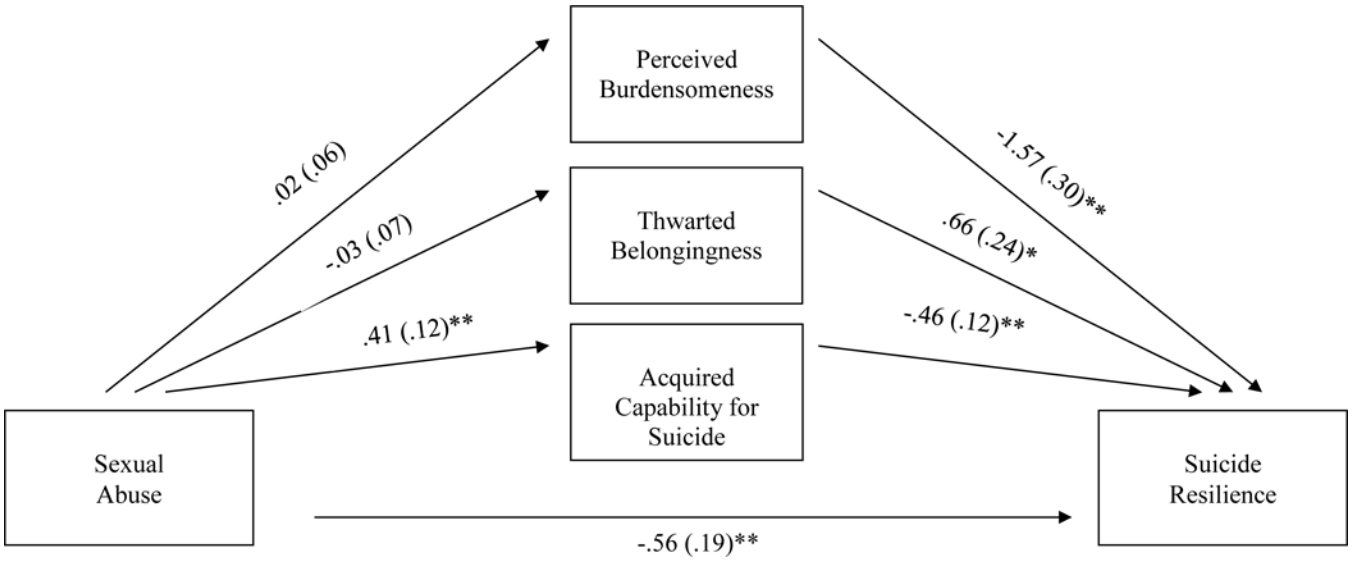

Figure 2.

Childhood Sexual Abuse Model Parameters *Notes.* Presented are unstandardized parameter estimates; standard errors in parentheses; *$p < .05$; **$p < .01$.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

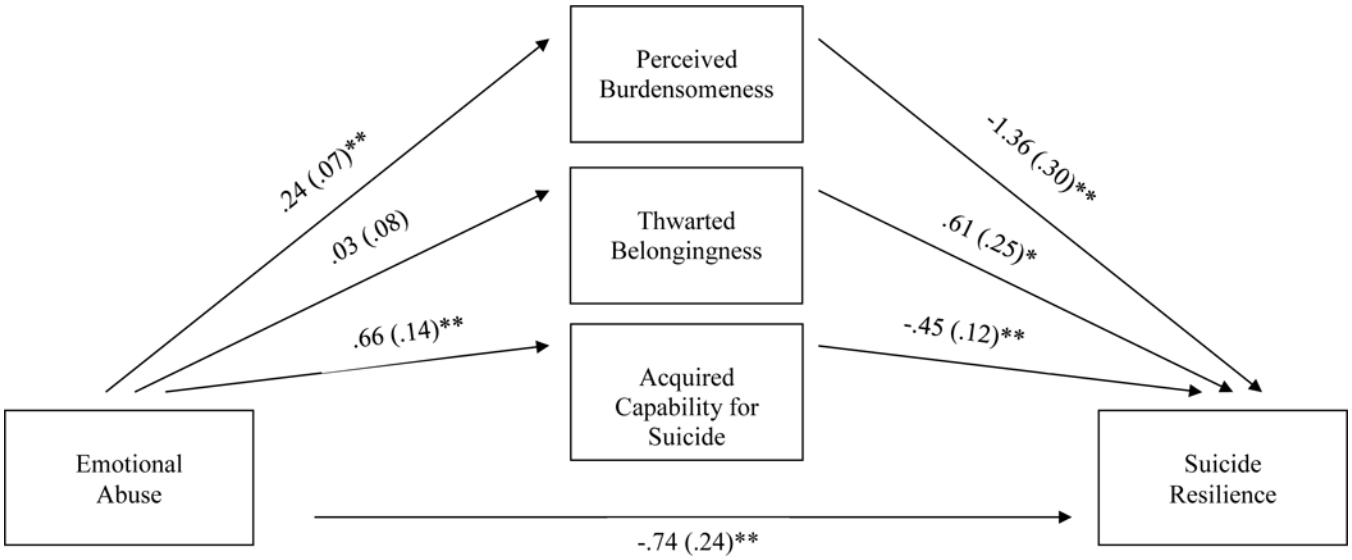

Figure 3.

Childhood Emotional Abuse Model Parameters *Notes.* Presented are unstandardized parameter estimates; standard errors in parentheses; *$p < .05$; **$p < .01$.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

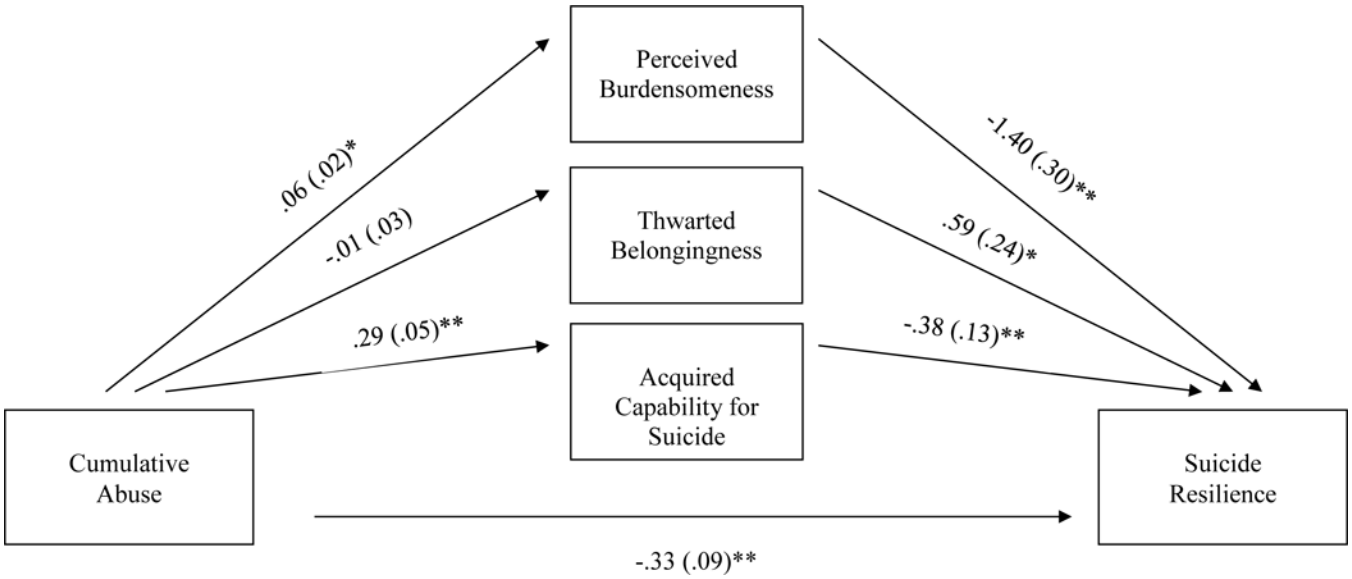

Figure 4.

Cumulative Abuse Model Parameters *Notes.* Presented are unstandardized parameter estimates; standard errors in parentheses; *$p < .05$; **$p < .01$.

Author Manuscript Author Manuscript Author Manuscript Author Manuscript

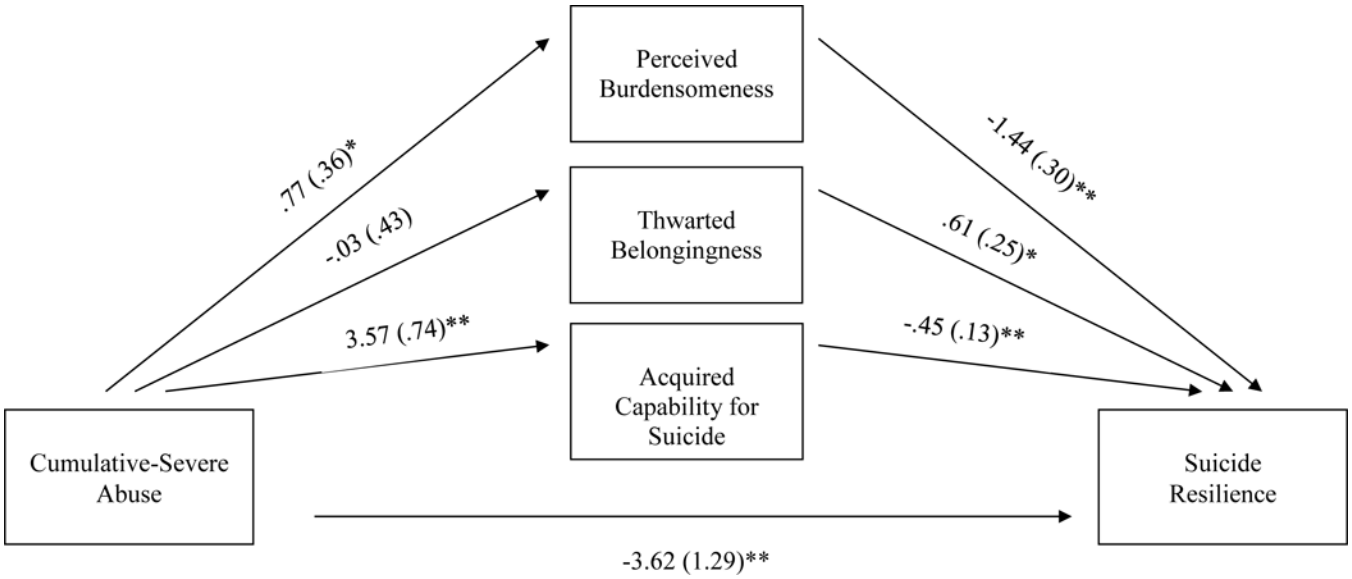

Figure 5.

Cumulative-Severe Abuse Model Parameters *Notes.* Presented are unstandardized parameter estimates; standard errors in parentheses; *$p < .05$; **$p < .01$.

Author Manuscript

Author Manuscript

Author Manuscript

Author Manuscript

Table 1.

Bivariate Correlations among IPTS Variables and Descriptive Statistics.

	1	2	3	4	5	6	7
1. Emotional Abuse	-						
2. Physical Abuse	.69**	-					
3. Sexual Abuse	.49**	.44**	-				
4. Suicide Resilience	-.38**	-.37**	-.28**	-			
5. Perceived Burdensomeness	.26**	.14	.03	-.37**	-		
6. Thwarted Belongingness	.02	-.02	-.03	.00	.52**	-	
7. Acquired Capability for Suicide	.33**	.41**	.26**	-.40**	.22**	-.02	-
M	16.86	13.76	16.6	94.88	24.8	35.96	61.09
SD	6.07	6.65	7.44	21.57	5.62	6.6	12.00

** *Note.* $p < .01$.